



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,842	09/10/2003	James P. DeYoung	5697.57CT	5522

20792 7590 04/29/2005

MYERS BIGEL SIBLEY & SAJOVEC
PO BOX 37428
RALEIGH, NC 27627

EXAMINER

CARRILLO, BIBI SHARIDAN

ART UNIT	PAPER NUMBER
----------	--------------

1746

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

ML

Office Action Summary

Application No.

10/659,842

Applicant(s)

DEYOUNG ET AL.

Examiner

Sharidan Carrillo

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 37-42 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-28 and 37-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-28, 37-42 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

re

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 20-25, 27-28, and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaartstra (6666986).

Vaartstra teaches supercritical etching compositions. In reference to claim 20,

Art Unit: 1746

col. 3, lines 45-65 teaches a composition comprising amine (Lewis base), hydrogen halide (HF), carbon dioxide, co-solvents, and surfactants (col. 6, lines 1-15, col. 10, lines 39-40). The limitations of an adduct are inherently met since Vaartstra teaches the same composition as the instantly claimed invention.

In reference claims 20, 24-25, and 40-41, Vaartstra fails to teach the concentration ranges. Absence of criticality, it would have been within the level of the skilled artisan to adjust the concentration. In reference to claim 21, refer to col. 11, claim 10. In reference to claims 22 and 38, the limitations are met since the pKa is a chemical property of the composition and Vaartstra teaches the same Lewis base as the instantly claimed invention. In reference to claims 23 and 39, Vaarstra fails to teach triethyl amine. However, it would have been within the level of the skilled artisan to modify the method of Vaarstra to include triethyl amine since Vaarstra teaches amines and further teaches dimethyl amine (col. 9, lines 11-12). In reference to claim 27, refer to col. 4, lines 58-60. In reference to claims 28 and 42, since Vaarstra teaches the same composition as the instantly claimed invention and since the density is a property of the composition, one would reasonably expect the composition of Vaarstra to process the same density characteristics.

5. Claims 20, 22, 24-26, 28, 37-38 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSimone et al. (6763840).

DeSimone et al. teach a composition comprising liquid carbon dioxide and an adjunct. The adjunct can be selected from various adjuncts including HF acid, bases (i.e. secondary and tertiary amines), solvents, surfactants, and mixtures thereof. In

reference claims 20, 24-25, and 40-41, DeSimone et al. fail to teach the concentration ranges. Absence of criticality, it would have been within the level of the skilled artisan to adjust the concentration. In reference to claim 26, refer to col. 3, lines 45-48. In reference to claims 22 and 38, the limitations are met since the pKa is a chemical property of the composition and DeSimone et al teaches the same Lewis base as the instantly claimed invention. In reference to claims 28 and 42, refer to col. 6, lines 17-25.

Response to Arguments

6. The rejection of the claims as being anticipated by Xu is withdrawn in view of applicant's arguments and upon review of the provisional application 60/345900.

7. The rejection of the claims as being obvious over Vaartstra is maintained. Applicant's arguments are unpersuasive. Col. 3, lines 45-60 teaches a supercritical composition selected from ammonia, amine, hydrogen halide (i.e. HF) and carbon dioxide and combinations thereof.

8. The rejection of the claims as being obvious over DeSimone is maintained. Applicant's arguments are unpersuasive since col. 4, lines 20-41 teaches an adjunct or mixture thereof comprising CO₂, hydrofluoric and secondary or tertiary amines.

6. This application contains claims 1-19 drawn to an invention nonelected with traverse in Paper No. 08/23/2004. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1746

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc



SHARIDAN CARRILLO
PRIMARY EXAMINER